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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Appellant(s): BELL, CYNTHIA S.

Timothy N. Trop, Reg. No. 28,994
For Appellant

"RESPONSE TO ORDER RETURNING UNDOCKETED APPEAL TO EXAMINER"

(Supplemental Examiner's Answer)

(1) Consideration of the IDS filed on June 19, 2000. The examiner called attorney Mr. Trop in order to find out if the IDS had be signed by the examiner. Mr. Trop acknowledged that it indeed had been signed and faxed a copy of the PTO 1449 to the examiner. At the bottom of the PTO 1449 (other documents) it appeared that the examiner inadvertently crossed out the 2 references. An initialed copy of the references has been created from the faxed PTO 1449. However, the references were considered and the rejection does not change.

(2) Clarification as to the status of the remaining claims on appeal, namely, claims 2-3, 5-7, 9-17 and 23. Claims 1-3, 5-17 and 21-23 are pending which includes claims 2-3, 5-7, 9-17 and 23. See Supplemental Examiner's Answer which follows.

(3) Clarification as to whether the examiner still relies upon Toffolo, Chikazawa and Bowen as prior art. Toffolo, Chikazawa and Bowen are used in the rejection, see Supplemental Examiner's Answer which follow.

SUPPLEMENTAL EXAMINER'S ANSWER

This is in response to the appeal brief filed on 6 November 2002.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-3, 5-17, and 21-23 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

US 5,760,760	HELMS	6-1998
US 5,589,934	HOSOI et al.	12-1996
US 6,337,675 B1	Toffolo et al.	1-2002
US 6,046,730	Bowen et al.	4-2000
EP 0 883 103 A1	Chikazawa	12-1998

(10) Grounds of Rejection

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8-12 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Helms, U.S Patent No. 5,760,760.

As per **claim 8**, Helms teaches a system, comprising:

a receiver of light information to produce an indicator (col. 3, lines 13-21); and

a microprocessor, which can be construed as the driver, coupled to the receiver, wherein the microprocessor (driver), #204a, receives the indicator, and, based upon the indicator,

automatically sends a signal to control a brightness of a display (col. 3, lines 29-38 and Figure 2, #204a).

As per **claim 9**, Helm teaches:

The system of claim 8, further comprising:

a display coupled to the microprocessor, (driver) #204a, wherein the display, #12, receives the signal (col. 3, lines 29-38 and Figure 2, #12 and #204a).

As per **claim 10**, Helm teaches:

The system of claim 8, further comprising:

a look-up table in the receiver, comprising a plurality of values corresponding to the light information and a plurality of values corresponding to the indicator (col. 3 and 4, lines 51-67 and 1-5, respectively).

As per **claim 11**, Helm teaches:

The system of claim 10, wherein the microprocessor, (driver) #204a, receives the indicator from the look-up table, #204b, (col. 3 and 4, lines 60-67 and 1-5 and Figure 2, #204a and #204b)

As per **claim 12**, Helms teaches:

The system of claim 10, wherein the plurality of values and the plurality of indicators in the look-up table are based upon a display type (col. 3 and 4, lines 60-67 and 1-5, respectively).

As per **claim 17**, Helm teaches:

The system of claim 8, wherein the indicator is a voltage from a sensor (col. 3, lines 13-22).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms as applied to claims 8, 10 or 12 above, and further in view of Chikazawa, EP 0 883 103 A1

As per **claims 13-14**, Helms discloses system that uses an indicator of ambient light (col. 3, lines 13-21), the indicator goes through a process in which a certain value is referenced from a look-up table (col. 3 and 4, lines 51-67 and 1-5, respectively), that is used to automatically adjust the brightness level of a display (col.1, lines 5-8).

Helms does not disclose a direct view liquid crystal display that can be used as a microdisplay.

Chikazawa discloses a direct view liquid crystal display (col. 1, lines 3-4) in which the color in the display can be automatically or manually adjust from the intensity of the ambient light source or the back source light (col. 1, lines 23-26 and 38-42). This LCD can be used in a video camera, which can be construed as a microdisplay (col. 1, lines 5-9).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the direct view LCD, to be used in a microdisplay of Chikazawa with Helms.

The suggestion/motivation for doing so would have been to provide a microdisplay that uses a direct view LCD with the method of automatically adjusting the brightness of the backlight. In turn, the apparatus, now having a direct view LCD and being a microdisplay, would encompass the methods of automatically adjusting the brightness and color. This would allow the user to operate a smaller video camera compared to a large video camera and the opportunity to view and record a great looking picture that should be perfectly viewed if focused and properly taken.

Therefore, it would have been obvious to combine Chikazawa with Helms to obtain the invention as specified in claims 13-14.

3. **Claims 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms as applied to claim 8 above, and further in view of Bowen et al., U.S. Patent No. 6,046,730.

As per **claims 15-16**, Helm discloses system that uses an indicator of ambient light (col. 3, lines 13-21), goes through a process in which a certain value is referenced from a look-up table (col. 3 and 4, lines 51-67 and 1-5, respectively), that is used to automatically adjust the brightness level of a display (col.1, lines 5-8).

Helms does not disclose an LCD that can be used as a mobile communication device and a mobile information device.

Bowen et al. discloses an apparatus that encompasses an LCD that can be used as a mobile communication device and mobile information device (col. 1, lines 9-15, col. 2, lines 40-54, col. 14, lines 64-67, col. 15, lines 1-9 and col. 15, lines 62-65)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the apparatus' of Bowen et al. with Helms.

The suggestion/motivation for doing so would have been to provide, in general a better operating apparatus. One advantage is with Helms, LCD and method of automatically adjusting the brightness, a person is able to conserve the power of a battery. By letting the LCD adjust itself, it will set the correct brightness to which the user may view the screen, according to the ambient light present. Also, by letting the LCD do this, it is able to decrease the brightness during low ambient light conditions. Another advantage is this LCD is able to learn a user's preferred brightness setting. If the user doesn't like what automatic adjustment has done, he/she may manually input the setting to their liking and store it in memory. By expanding these

methods to different apparatus', i.e. cell phones, PDA's, a more marketable product is enticed to the consumers.

Therefore, it would have been obvious to combine Bowen et al. with Helms to obtain the invention as specified in claims 15-16.

4. **Claims 1-3, 5-6 and 21-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms, U.S Patent No. 5,760,760 and further in view of Hosoi et al., U.S Patent No. 5,589,934.

As pertaining to claims 1 and 21-22, Helms discloses a method, comprising:

receiving an indicator of the ambient light for a system having a display (col. 3, lines 13-21); and automatically adjusting a brightness for the display based upon the indicator (col.1, lines 5-8).

As pertaining to claims 1 and 21-22, Helms does not disclose an imager with a plurality of sensors that are used to accumulate energy, derive an integration time based on the accumulated energy and to determine the indicator based on that time. Even though Helms does not expressly disclose what is stated above, it would be known that the circuit of Helms would provide this function. An example would be of the following by incorporating Hosoi et al. with Helms.

As pertaining to claim 1 and 21-22, Hosoi et al. discloses a light emitting apparatus, which measures ambient light and flash light (col. 1, lines 8-10). This apparatus can be further construed as an imager. A sensor is used to read the ambient light. A photoelectric converter #40 for converting the light into an analog signal, which corresponds to the intensity of the light being measured. The signals are then accumulated in two integration circuits, #44 A and #46 B. Within these two integration circuits, integration time signals or indicators are generated by the accumulated signals and outputted to an A/D converter, which is then outputted to the CPU 52.

The CPU 52 controls and drives the apparatus. Integration is carried out for time ***t1*** by integration circuit A immediately of measurement button 4 is turned on and is integrated again for time ***t1*** when prescribed time ***T*** has elapsed. The integration output accumulated in the first integration is deemed ***Q1*** and the integration accumulated the second time is deemed ***Q2***. After the two integration sessions have taken place, another integration is performed for time ***tA*** in order to measure the ambient light. The integration output is then called ***QA1***. The above description can be applied to two cases in which either ambient light or flash light is involved. In the case that involves the measurement of ambient light, there is no flash light involved. Therefore when the measurement button 4 is turned on only the ambient light is being measured the values described above. So, at the two integration sessions performed for time ***t1***, the two outputs ***Q1*** and ***Q2*** obtained from the two integration sessions are equal to each other ***Q1=Q2***. Then the CPU 52 compares the two outputs and determines that the ambient light was measured by detecting that ***Q1=Q2.*** When this happens the CPU 52 carries out photometric calculation based on the integration output ***QA1*** and outputs the result of the photometric calculation to display 14 as a measurement value obtained during the ambient light measurement. In the case that involves flash light, a cord connected measurement is processed the same way as stated above, but in this case ***Q1>Q2***, this allows the CPU 52 to determine that flash light is involved and it proceeds with the proper calculation (col. 3, lines 48-67; col. 4, lines 40-68; col. 5, lines 1-34 and Figs 2-3). In the case of non-cord measurement, integration circuit B is used because of a light trigger detection circuit 48 that detects the commencement of the flash light emission. The same operation for ambient is used until the flash light is emitted. Once the light trigger detection circuit 48 detects the flash light emission, the CPU 52 immediately outputs integration time signal B in order to cause integration circuit B to start the integration process. Integration is preformed for time ***t1***, the output obtained is

called ***QF***. Once the integration is complete a switching signal is used to switch ***S1,*** which allows the signal ***QF*** to be inputted into CPU 52. Then CPU 52 carries out the photometric calculation as stated before but with regards to the non cord measurement (col. 5, lines 35-54 and Fig. 3).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the reference of Hosoi et al., to use as an example to thoroughly explain what Helms is disclosing.

The suggestion/motivation for doing so would have been to provide Hosoi et al. as an example or a teaching tool to better explain or illustrate more thoroughly to what Helms is disclosing. Helms and Hosoi et al. are very closely related in which how they operate. They both use sensors, which act like CCDs to obtain the intensity of the ambient light, they obtain the correct information to adjust the display according to the ambient light or flash light, they use A/D converters, they use microprocessors in which everything stated is coupled to a display. The difference is that Hosoi et al. fully describes the integration part of the circuit, whereas Helms hints at it. Furthermore, Hosoi et al. can be construed as an imager. Therefore by combining the two references, the examiner is able to provide an apparatus and explanation that is able to automatically adjust the brightness of the display caused by excessive or insufficient ambient light.

Therefore, it would have been obvious to combine Helms with Hosoi et al. to obtain the invention as specified in claim 1 and 21-22.

As per **claim 2**, Helms teaches:

The method of claim 1, further comprising:

using the indicator as an index into a look-up table (col. 3 and 4, lines 51-67 and 1-5, respectively).

As per **claim 3**, Helms teaches:

The method of claim 1, wherein receiving the indicator of the ambient light further comprises using a brightness control circuitry (col. 3, lines 25-33), which can be construed as a light meter circuit.

As per **claim 5 and 23**, Helms teaches:

The method of claim 2, further comprising:

receiving a brightness value for the display from the look-up table (col. 3 and 4, lines 60-67 and 1-5, respectively).

As per **claim 6**, both Helms and Hosoi et al., both teach that the accumulated energy is a analog voltage signal (Helms: col. 3, lines 39-50; Hosoi et al.: col. 3, lines 64-67).

5. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Helms and Hosoi et al., as applied to claims 1 or 3 above, and further in view of Toffolo et al., U.S Patent No. 6,337,675 B1.

Helms discloses an indicator of ambient light (col. 3, lines 13-21) uses a brightness control circuitry (light meter circuit) (col. 3, lines 25-33) that helps the process of automatically adjusting the brightness of a display (col.1, lines 5-8).

Helms does not disclose light meter circuit that produces a logarithmic representation of the incident light.

Toffolo et al. discloses a graph that presents a linear representation of the ambient light vs. the display luminance. Toffolo et al. further states that a logarithmic representation may be used instead of a linear representation (col. 2, lines 14-61 and Figure 2).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the logarithmic representation of Toffolo et al. with Helms.

The suggestion/motivation for doing so would have been to provide a better range of luminance. Compared to a linear representation, a logarithmic has many determining coefficients and other variables that make the representation of incident light last longer, quicker etc.

Therefore, it would have been obvious to combine Toffolo et al. with Helms to obtain the invention as specified in claim 7.

(11) Response to Argument

With regards to arguments page 9, subtitled A. *"Is Claim 1 obvious over Helms in view of Hosoi?"* of Appeal Brief: it appears the Appellant is arguing that the secondary reference Hosoi et al. is used for image capture and not for display brightness control and that Hosoi et al. cannot be directly incorporated into Helms.

First, Helms teaches all of claim 1 with an indicator (signal AL, fig. 2) which is indicative of the ambient light condition, sensors (photodetector 14) wherein the system performs automatic brightness control (see col. 3, lines 10-15)

Helms does not show how photodetector 14 operates. Note that the output of photodetector 14 is an analog signal indicating ambient brightness level. This analog signal suggests accumulation of energy over time (integration time period) that is, to determine the ambient level as an analog value. The sensor must accumulate charge unlike a digital sensor which would be on/off.

Hosoi is added to simply provide a more detailed possible operation of the photodetector 14 of Helms.

Also Note:

1. Since the output of photodetector 14 of Helms is an analog signal inputted into an A/D converter it is obvious that the sensor of Hosoi (comprising elements 40, 42, 44 and 46) corresponds to photodetector 14 of Helms, since the sensor of Hosoi also inputs a signal into A/D converter 50.

2. Also, Hosoi does teach a sensor for adjusting the brightness of a display using detectors 16, 54, and 56 to control the brightness of display 14(see fig. 3). Note that Hosoi teaches that "the function of photoelectric converter element 16 may be performed by light measurement photoelectric converter element 40..." (see col. 3, lines 2-4 of Hosoi).

With regards to argument page 10, subtitled B. *"Is Claim 8 Anticipated by Helms?"* of Appeal Brief:

First none of what Appellant is arguing is claimed in claim 8.

Second, it appears Appellant's argument that Helms uses a LUT only supports the rejection of claim 8 under 35 U.S.C 102 over Helms since Appellant's specification also uses a LUT (even though LUT is not claimed in claim 8).

With regards to argument page 11, subtitled C. *"Is Claim 21 obvious over Helms in view of Hosoi?"* The imager can be construed as any of the light sensors or photodetectors. It appears Appellant is suggesting that the imager is capturing an image. However, it appears from claim 21 that the imager is simply an ambient light detector as are the detectors of Helms (14) and Hosoi (40, 42 and/or 16, 54).

As to claim 22 see Helms, which performs automatic brightness control of a display, see col. 2, lines 10-15.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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